

FP09-05 Executive Summary	
<b>General Description</b>	Proposal FP09-05 seeks to close the Federal public waters in the Makhnati Island area near Sitka to the harvest of herring and herring spawn except for subsistence harvests by Federally qualified subsistence users. <i>Submitted by the Sitka Tribe of Alaska</i>
<b>Proposed Regulation</b>	<i>§ __.27(i)(13)(xxii) The Federal public waters in the Makhnati Island area, as defined in 36 CFR 242.3(b)(5) and 50 CFR §100.3(b)(5) are closed to the harvest of herring and herring spawn except for subsistence harvests by Federally qualified subsistence users.</i>
<b>Southeast Regional Council Recommendation</b>	<b>Support</b>
<b>Interagency Staff Committee Comments</b>	See comments following the analysis.
<b>ADF&amp;G Comments</b>	<b>Oppose</b>
<b>Written Public Comments</b>	<b>2 Oppose</b>

## REGIONAL ADVISORY COUNCIL RECOMMENDATION FP09-05

### SOUTHEAST REGIONAL ADVISORY COUNCIL

**Support** Proposal FP09-05. The Council determined that there was significant new information presented at this meeting by the Sitka Tribe that was not available to the Council when this issue was previously discussed in 2007. This new information indicated to the Council that it was necessary to close the waters of the Makhnati Island area to non-subsistence uses for both the conservation of herring in Sitka Sound and to protect the continuation of subsistence uses of herring spawn. Analysis of the chemical composition of herring otoliths by Sitka Tribe biologist indicate that herring spawning in the Sitka Sound management area are actually composed of a Sitka Sound spawning stock and a separate spawning stock in Salisbury Sound. Additional analysis of available data show the numbers of herring spawning in these areas are actually decreasing while the increasing biomass is due to increases in weight of each fish. In addition, recent fishing patterns have contributed to changing the primary spawning areas to locations where larvae may not survive. From 1978 to 2001, 100 percent of age four fish were mature whereas now many of age six fish are not mature. Increasing age at maturity and slower growth rates are troubling signs of poor stock health.

The amounts necessary for subsistence have not been met in 2001, 2005, 2007 and 2008 under the State's management regime. The commercial sac roe fishery, including the test fishing program, disrupts herring schools that are staging to spawn in customary and traditional areas, including Makhnati Island. Herring have spawned within these Federal waters 34 out of 44 years or 77 percent of the time. Herring spawning site fidelity for returning spawners is not as highly variable as previously reported. Herring have spawned in the Middle Island, Kasiana Island area 43 out of 44 years or 98 percent of the time. However localized stock depletion has occurred due to disturbance of these fish and subsequently subsistence needs are not being met.

The Council concluded that closing the Makhnati Island area is the only means available to the Council to provide a meaningful subsistence priority for the waters under Federal jurisdiction. This action will have no effect on non-subsistence users as the area under consideration is a very small fraction of the total herring spawning area within Sitka Sound. However, if the area remains open to non-federally qualified use, there may be detrimental effects on subsistence users.

## STAFF ANALYSIS FP09-05

### ISSUES

Proposal FP09-05 was submitted by the Sitka Tribe of Alaska (STA) and seeks to close the Federal public waters in the Makhnati Island area near Sitka (**Maps 1 and 2**) to the harvest of herring and herring spawn except for subsistence harvests by Federally qualified subsistence users.

### DISCUSSION

The proponent believes a closure of these waters is necessary to ensure the continuation of subsistence uses by Federally qualified subsistence users and to provide a meaningful preference for qualified subsistence users of herring. The proponent states that under the current State management plan which has been in effect since 2002, the commercial herring fishery is to be dispersed if the local fisheries manager believes it is necessary to ensure that subsistence users have a reasonable opportunity to harvest the amount of herring spawn necessary for subsistence uses. The proponent states that despite this regulation, subsistence users were unable to harvest the amount of herring spawn necessary for subsistence uses in 2005 and 2007. In these same years, the commercial fishery has met its quota.

The proponent believes that the commercial fishing effort in and near subsistence herring spawn harvest sites cannot be overstated. The proponent believes that herring have not been consistently spawning in traditional subsistence areas. The proponent states that traditional ecological knowledge and local observation support that the commercial harvest of herring displaces subsistence users from traditional harvesting sites, disrupts herring spawning such that good quality deposition of herring eggs does not take place at traditional sites, causes herring to spawn away from subsistence sites, and may seriously reduce the biomass of spawning herring upon which subsistence users depend.

The proponent also believes that a closure is necessary to ensure subsistence uses can continue in the Federal public waters because in-season management to protect subsistence uses is virtually impossible because the commercial fishery precedes the subsistence fishery so that by the time subsistence users realize they are unable to harvest herring eggs, the commercial fishery is already completed.

### Existing Federal Regulation

Under existing Federal regulations, all rural residents of Alaska are eligible to harvest herring and herring spawn from Federal public waters in Southeast Alaska. There is no season or harvest limit in regulation.

### Proposed Federal Regulation

***§ \_\_.27(i)(13)(xxii) The Federal public waters in the Makhnati Island area, as defined in 36 CFR 242.3(b)(5) and 50 CFR §100.3(b)(5) are closed to the harvest of herring and herring spawn except for subsistence harvests by Federally qualified subsistence users.***

### Extent of Federal Public Waters

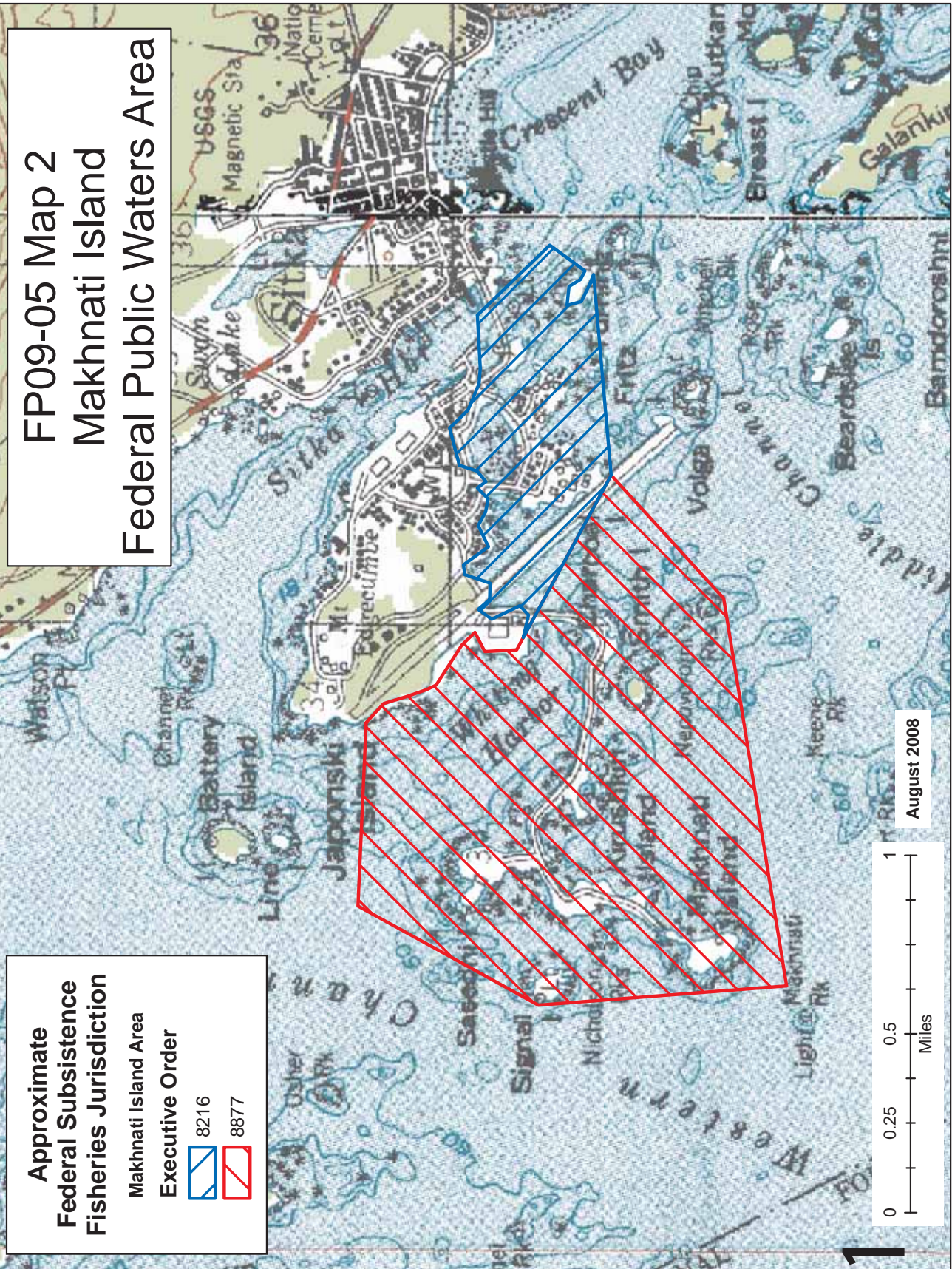
The Federal subsistence program has jurisdiction over the waters near Makhnati Island as described in 36 CFR 242.3(b)(5) and 50 CFR §100.3(b)(5). The Makhnati area was described in two Executive Orders,

# Proposal FP09-05

## Map 1: Sitka Sound and Vicinity









8817 (approximately 610 acres) and 8216 (approximately 190 acres) for a total of approximately 800 acres (**Map 2**). The Makhnati Island area is described in regulation as follows:

Southeastern Alaska—Makhnati Island Area: Land and waters beginning at the southern point of Fruit Island, 57°21'35" north latitude, 135°21'07" west longitude as shown on United States Coast and Geodetic Survey Chart No. 8244, May 21, 1941; from the point of beginning, by metes and bounds; S. 58° W., 2500 feet, to the southern point of Nepovorotni Rocks; S. 83° W., 5600 feet, on a line passing through the southern point of a small island lying about 150 feet south of Makhnati Island; N. 6° W., 4200 feet, on a line passing through the western point of a small island lying about 150 feet west of Makhnati Island, to the northwestern point of Signal Island; N. 24° E., 3000 feet, to a point, 57°03'15" north latitude, 134°23'07" west longitude; East, 2900 feet, to a point in course No. 45 in meanders of U.S. Survey No. 1496, on west side of Japonski Island; southeasterly, with the meanders of Japonski Island, U.S. Survey No. 1496 to angle point No. 35, on the southwestern point of Japonski Island; S. 60° E., 3300 feet, along the boundary line of Naval reservation described in Executive order No. 8216, July 25, 1939, to the point beginning, and that part of Sitka Bay lying south of Japonski Island and west of the main channel, but not including Aleutski Island as revoked in Public Land Order 925, October 27, 1953, described by meets and bounds as follows: Beginning at the southeast point of Japonski Island at angle point No. 7 of the meanders of U.S. Survey No. 1496; thence east approximately 12.00 chains to the center of the main channel; thence S. 45° E. along the main channel approximately 20.00 chains; thence S. 45° W. approximately 9.00 chains to the southeastern point of Aleutski Island; thence S. 79° W. approximately 40.00 chains to the southern point of Fruit Island; thence N. 60° W. approximately 60.00 chains to the southwestern point of Japonski Island at angle point No. 35 of the U.S. Survey No 1496; thence easterly with the meanders of Japonski Island to the point of beginning including Charcoal, Harbor, Alice, Love, Fruit islands and a number of smaller unnamed islands.

For purposes of this discussion, the phrase "Federal public waters" is defined as those waters described under 50 CFR 100.3.

### **Customary and Traditional Use Determinations**

*Sec. 100.24 Customary and traditional use determinations.*

*(a) The Federal Subsistence Board has determined that rural Alaska residents of the listed communities, areas, and individuals have customary and traditional use of the specified species on Federal public land in the specified areas. Persons granted individual customary and traditional use determinations will be notified in writing by the Board. The Fish & Wildlife Service and the local NPS Superintendent will maintain the list of individuals having customary and traditional use on National Parks and Monuments. A copy of the list is available upon request. When there is a determination for specific communities or areas of residence in a Unit, all other communities not listed for that species in that Unit have no Federal subsistence priority for that species in that Unit. If no determination has been made for a species in a Unit, all rural Alaska residents are eligible to harvest fish or wildlife under this part.*

The Board has not addressed a customary and traditional use determination for herring in this area; therefore, all rural residents of Alaska may harvest herring and herring spawn in this area.

## Regulatory History

### Federal Regulatory History

In January 2007, the Board considered two proposals regarding the subsistence herring egg harvest in the Makhnati Federal public waters near Sitka (FSB 2007a). FP07-18 was submitted by the Southeast Alaska Subsistence Regional Advisory Council (Council) and FP07-19 was submitted by the STA. Both proposals sought to close the Makhnati Federal public waters to commercial herring fishing during the months of March and April. The proponents believed that the closure would be a constructive step toward ensuring that subsistence needs for herring and herring spawn would be met. The Board deferred action on proposal FP07-18 and took no action on FP07-19 (FSB 2007a). The Board asked the Council to form a subcommittee to recommend criteria which would govern decisions to open or close the commercial herring fishery in the Makhnati Federal public waters and possible alternate solutions. The subcommittee did not reach consensus on all recommendations. However their report was presented to the Council in September, 2007. The Council accepted the report and distributed it to the public. At their September meeting, the Council developed closure language for the Makhnati Island area based on the subcommittee report. The Council recommended the closure of Federal public waters near Makhnati Island to non-Federally qualified subsistence users when the forecast herring biomass is less than 35,000 tons for the Sitka Sound area or when Amounts Necessary for Subsistence (ANS) are not met for two consecutive years (SESRAC 2007). In comparison, the State of Alaska's herring management plan uses a threshold level of 20,000 tons, below which no commercial sac roe harvest would occur. The Board considered the Council's recommendation during a December 2007 public meeting as part of proposal FP08-18. Following considerable oral testimony from Tribal representatives, professional managers and staff, the Board rejected the Council's recommendation. The Board's rationale for rejection was that there was not substantial evidence of a conservation concern or a need for a closure to insure the continuance of subsistence uses (FSB 2007b).

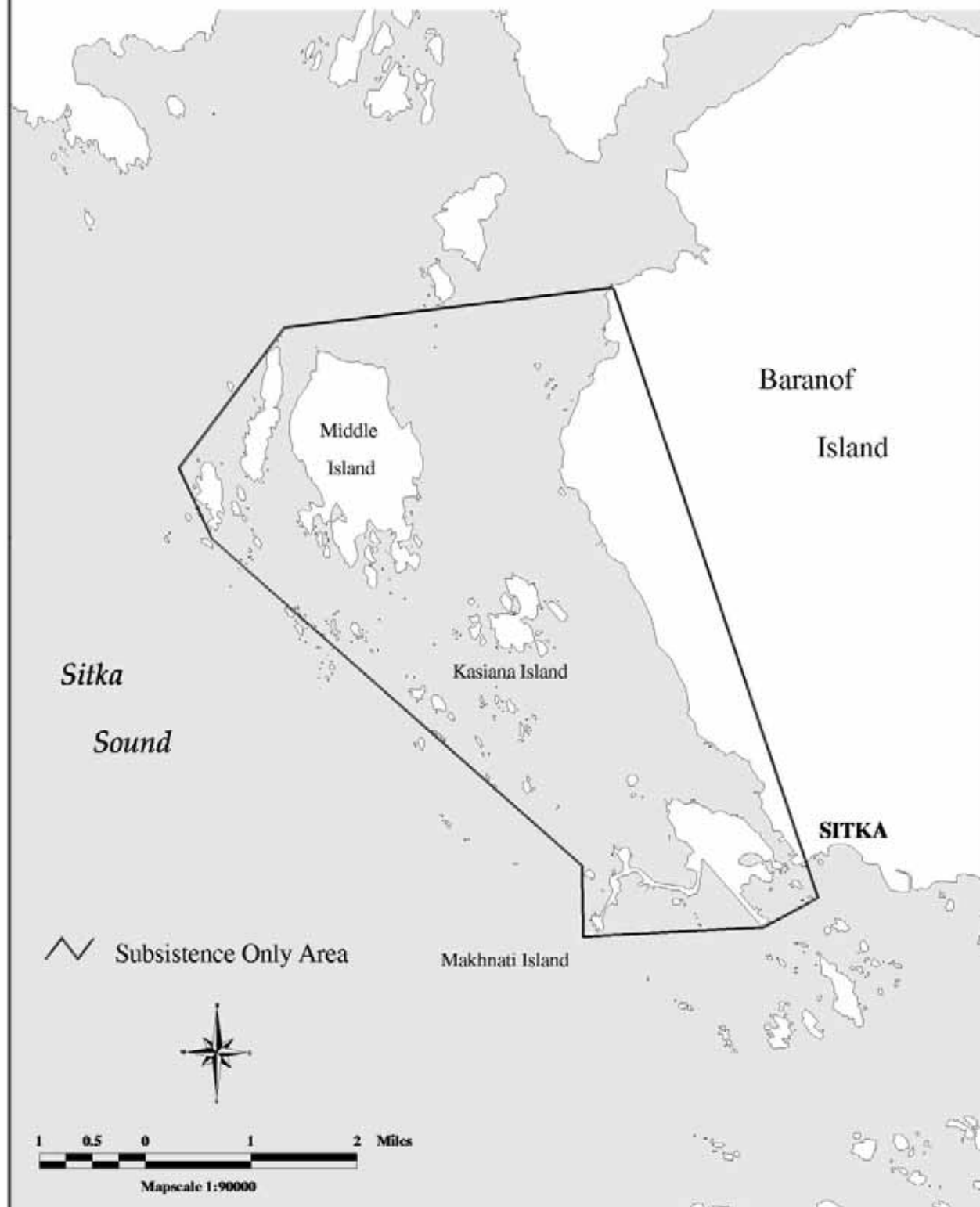
On March 25, 2008 a letter was received by the Federal Subsistence Board from the STA requesting the following: The Federal public waters in the Makhnati Island area, as defined in 36 CFR 242.3(b)(5) and 50 CFR §100.3(b)(5) are closed to the harvest of herring and herring spawn except for subsistence harvests by Federally qualified subsistence users from March 24, 2008 through April 30, 2008. The Federal Subsistence Board responded by letter dated April 3, 2008. The Board informed the STA that the commercial fishery was completed prior to the Board action and consequently the matter was made moot.

Also on March 25, 2008 a letter was received by the Secretaries of Agriculture and the Interior from STA requesting that they impose extra territorial jurisdiction authority to close the commercial herring fishery in the area shown in **Map 3**. In a letter to the STA, the Secretaries denied STA's request, and stated that the Secretaries "only exercise their authority to impose Federal jurisdiction outside of Federal public land under extraordinary circumstances. The threshold for such a decision is extremely high, and is not met in this case. With such a healthy herring biomass, there is clearly no conservation concern with regard to the herring stocks and the associated fishery in Sitka Sound. Given the spawning characteristics of herring, closing State marine waters as is being requested would not significantly increase the likelihood of Federally qualified users harvesting their desired amounts in the Makhnati Island Federal public waters.

### State Regulatory History

In response to a poor subsistence herring egg harvest in 2001, the STA submitted a proposal to the Alaska Board of Fisheries in 2002. The proposal requested that the herring sac roe fishery be dispersed to avoid concentrating the commercial harvest in traditional subsistence egg harvesting areas. The Alaska Board of Fisheries amended the proposal by removing a suggested requirement for a subsistence permit in

**Map 3: Area requested of ADF&G by the Sitka Tribe of Alaska to be open only to subsistence uses of herring.**





favor of face to face surveys to estimate subsistence herring egg harvest. The Alaska Board of Fisheries also established the amount necessary for subsistence (ANS) herring roe in Sitka Sound, Section 13-A and 13-B north of the latitude of Aspid Cape at 105,000 to 158,000 pounds (5AAC 01.716(7) (b)) (Turek 2003). Regulations also limit customary trade in herring roe on kelp (5AAC 01.717 and 5 AAC 01.730 (g)). Other than spawn on kelp, there are no harvest limits for herring or herring spawn. When issuing a herring spawn on kelp subsistence fishing permit, the annual possession limit for herring spawn on kelp is 32 pounds for an individual or 158 pounds for a household of two or more persons. There are no regulations regarding subsistence reporting requirements, or specific allocations for subsistence (Turek 2006).

In November of 2002 a Memorandum of Agreement (MOA) was signed by the Chairman of the Alaska Board of Fisheries, the Commissioner of the Alaska Department of Fish and Game (ADF&G) and the STA Chairman. The State and the STA agreed to collaborate, communicate, and collect and share data (STA 2006). The MOA contains provisions for in-season collaboration which includes daily contact between the STA and ADF&G and stipulates that the STA will be consulted whether a proposed commercial opening might affect subsistence opportunity. If the STA concludes there is potential for the subsistence fishery to be negatively impacted by a proposed opening, the STA will provide this conclusion and reasoning to ADF&G verbally and in writing. A formal objection to a proposed opening does not necessarily result in a commercial closure, as ADF&G maintains discretion whether or not to open the commercial fishery.

The ADF&G is required to “distribute the commercial harvest by fishing time and area if the department [ADF&G] determines that is necessary to ensure that subsistence users have a reasonable opportunity to harvest the amount of herring spawn necessary for subsistence uses” (5AAC27.195(a)(2)). Additionally, commercial herring vessels, permit holders, and crew members may not take or possess herring for subsistence 72 hours prior to or following a commercial herring fishing period.

A proposal (#234) by the Sitka Tribe of Alaska to increase the amounts reasonably necessary for subsistence (ANS) of herring roe from the current range of 105,000 to 158,000 pounds to a range of 265,000 to 325,000 pounds has been submitted to the Alaska Board of Fisheries for deliberation in February 2009.

## **Biological Background**

Excerpted from the ADF&G Wildlife Notebook Series (ADF&G 2000):

Pacific herring generally spawn during the spring. In Alaska, spawning is first observed in the southeastern archipelago during mid-March. Spawning is confined to shallow, vegetated areas in the intertidal and subtidal zones.

The eggs are adhesive, and survival is better for those eggs which stick to intertidal vegetation than for those which fall to the bottom. Milt released by the males drifts among the eggs and fertilizes them. The eggs hatch in about two weeks, depending on the temperature of the water.

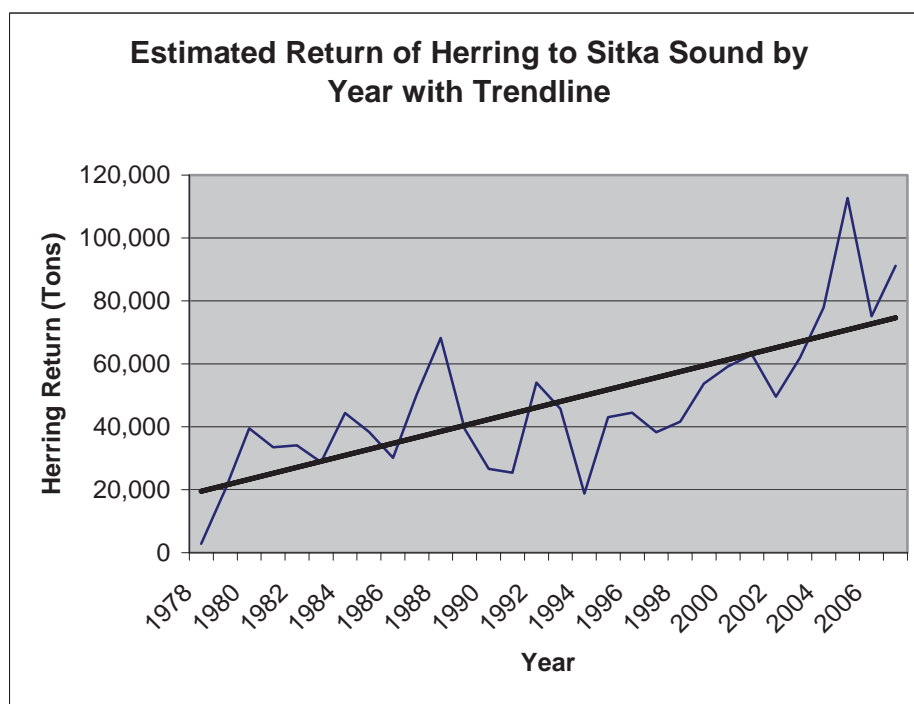
Herring spawn every year after reaching sexual maturity at 3 or 4 years of age. The number of eggs varies with the age of the fish and averages 20,000 annually. Average life span for these fish is about 8 years in Southeast Alaska.

Mortality of the eggs is high. Young larvae drift and swim with the ocean currents and are preyed upon extensively by other vertebrate and invertebrate predators. Following metamorphosis of the

larvae to the juvenile form, they rear in sheltered bays and inlets and appear to remain segregated from adult populations until they are mature.

Herring are located in distinctly different environments during different periods of the year. After spawning, most adults leave inshore waters and move offshore to feed primarily on zooplankton such as copepods and other crustaceans. They are seasonal feeders and accumulate fat reserves for periods of relative inactivity. Herring schools often follow a diel vertical migration pattern, spending daylight hours near the bottom and moving upward during the evening to feed.

The estimated spawning biomass of herring in Sitka Sound from 1978 to 2007 has been trending upward (**Figure 1**).



**Figure 1.** Estimated return of herring to Sitka Sound from 1978 through 2007 showing upward trend (Data from Davidson et al. 2006 and Gordon 2008).

## Harvest History

### Subsistence Harvest Methods

The subsistence herring egg harvest is a complex and time intensive process. According to Schroeder and Kookesh (1989), this customary and traditional harvest is conducted using a variety of egg deposition strata including hemlock branches and trees, kelp, seaweed and occasionally man-made materials. In the spring (late March-April), seal, sea lion, and sea gull feeding activity are indicators for subsistence harvesters that the herring have arrived to Sitka Sound. There are many “superhouseholds” who harvest herring eggs for multiple households in addition to their own. Herring eggs are a highly valued item in subsistence trade and sharing networks. For a detailed examination of the subsistence herring egg harvest, please refer to Schroeder and Kookesh (1989) in Appendix A.

## Subsistence Harvest

ADF&G Division of Subsistence conducted research on the subsistence harvest of herring eggs in Sitka Sound as part of household harvest surveys conducted in Sitka in 1997. These studies included herring egg harvest estimates (ADF&G 2003). At the January 2002 meeting, the Alaska Board of Fisheries requested that ADF&G Division of Subsistence work with the STA and conduct harvest surveys for the Sitka Sound herring egg fishery. In 2002 and 2003, the ADF&G provided field survey and interview project support, and data analysis. The STA, working with ADF&G staff conducted interviews in person with harvesters and provided harvest data to ADF&G for analysis in 2002 and 2003. Research conducted by ADF&G and the STA in 2002 and 2003 produced harvest estimates of the total pounds of herring eggs-on-hemlock-branches and the total pounds of herring eggs harvested on *Macrocystis*, hair seaweed and other substrate. The STA also collected harvest data from 2004 through 2008 (STA 2006 and Turek 2008). In 2008 a project (08-651 Makhnati Island Subsistence Herring Fishing Assessment) was funded through the Fisheries Resource Monitoring Program to determine the contribution of Federal public waters to the total harvest of herring spawn in Sitka Sound. The project results from the 2008 herring harvest should be available this fall. For the seven available years of data (1997, 2002-2007), the average annual total harvest of eggs in Sitka Sound on all substrates was 176,201 pounds (**Table 1**).

**Table 1.** Subsistence Harvest of Herring Roe on All Substrates, Sitka Sound (STA 2008).

Year	Total Roe Harvest (lbs)
1997	127,174
2002	151,717
2003	278,799
2004	293,579
2005	75,572
2006	219,356
2007	87,211
2008	Pending
Average	176,201

## Commercial Harvest

The following is excerpted from Woodby et al. 2005:

Sac roe fisheries harvest herring just before spawning using either purse seine or gillnet. The roe is salted and packaged as a product that sometimes sells for over \$100/lb (\$220/kg) in Japan. In recent years the Alaska sac roe harvest has averaged about 50,000 tons (45,500 mt), almost all of which ends up in the Japanese marketplace.

The 2008 Southeast Alaska Sac Roe Herring Fishery Management Plan (Bergman et al. 2008) can be found in **Appendix B**. The plan covers all commercial sac roe herring fisheries in Southeast Alaska, but has been edited to include only the Sitka Sound fishery. **Table 2** displays the fisheries statistics for the Sitka Sound commercial sac roe herring fishery from 1978 through 2008 (Davidson et al. 2006, Gordon 2008).

## **Effect of the Proposal**

This proposal would close the Federal public waters in the Makhnati Island area near Sitka to all uses of herring and herring spawn except for subsistence harvest by Federally qualified subsistence users. All rural residents of Alaska would be able to harvest herring and herring spawn for subsistence purposes, but there would be no sport or commercial harvest in Federal public waters.

A Federal closure of a fishery may only be exercised when it is necessary to conserve fish stocks or to continue subsistence uses. The Board determined in December of 2007 that there was no conservation

**Table 2.** Sac Roe Herring Harvest and Herring Spawn Information, Sitka Sound (Davidson et al. 2006 and Gordon 2008).

	Forecast			Spawn	Catch +		Date	Date of	Nautical
	Biomass	Quota	Harvest	Deposition	Esc =	Roe	First	First	Miles
Year	(tons)	(tons)	(tons)	Estimate (tons)	Return (tons)	Percent	Opened	Spawn	Spawn
1978	4,500	250	175	2,700	2,875	11	05-Apr	08-Apr	13
1979	20,300	2,000	2,250	17,750	20,000	9.3	12-Apr	13-Apr	41
1980	39,500	4,000	4,385	35,100	39,485	10.8	04-Apr	03-Apr	63
1981	27,000	3,000	3,506	30,000	33,506	11	24-Mar	22-Mar	60
1982	30,000	3,000	4,363	29,700	34,063	11.7	30-Mar	24-Mar	41
1983	32,850	5,500	5,450	23,250	28,700	11.1	26-Mar	21-Mar	68
1984	30,550	5,000	5,830	38,500	44,330	11.1	26-Mar	21-Mar	65
1985	38,500	7,700	7,475	30,950	38,425	11.3	29-Mar	29-Mar	61
1986	30,950	5,029	5,443	24,750	30,193	11.9	02-Apr	27-Mar	52
1987	24,750	3,600	4,216	46,050	50,266	9.9	31-Mar	21-Mar	86
1988	46,050	9,200	9,575	58,650	68,225	9.5	04-Apr	23-Mar	104
1989	58,500	11,700	12,135	27,200	39,335	9.4	31-Mar	19-Mar	66
1990	27,200	4,150	3,804	22,750	26,554	10.6	05-Apr	31-Mar	39
1991	22,750	3,200	1,908	23,450	25,358	8.9	10-Apr	01-Apr	45
1992	23,450	3,356	5,368	48,600	53,968	9.4	06-Apr	28-Mar	73
1993	48,500	9,700	10,186	35,500	45,686	10.7	27-Mar	24-Mar	55
1994	28,450	4,432	4,758	14,026	18,784	11	29-Mar	28-Mar	58
1995	19,700	2,609	2,908	40,169	43,077	11.8	25-Mar	21-Mar	37
1996	42,265	8,144	8,144	36,372	44,516	9.6	23-Mar	22-Mar	46
1997	54,500	10,900	11,147	27,126	38,273	11.5	18-Mar	19-Mar	41
1998	39,200	6,900	6,705	34,943	41,648	10.2	16-Mar	19-Mar	65
1999	43,600	8,476	9,136	44,610	53,746	10.7	22-Mar	22-Mar	60
2000	33,365	5,120	4,813	54,399	59,212	9.9	19-Mar	19-Mar	55
2001	52,985	10,597	11,972	51,000	62,972	10.9	22-Mar	23-Mar	61
2002	55,209	11,042	9,789	39,719	49,508	10.9	27-Mar	24-Mar	43
2003	39,319	6,969	7,051	54,875	61,926	10.7	22-Mar	23-Mar	47
2004	53,088	10,618	10,490	67,379	77,869	10.8	21-Mar	27-Mar	80
2005	55,962	11,192	11,366	101,305	112,671	11.5	23-Mar	24-Mar	40
2006	52,059	10,412	9,967	65,126	75,093	10.5	24-Mar	23-Mar	57
2007	59,519	11,904	11,571	79,598	91,169	11.4	26-Mar	28-Mar	50
2008	87,715	14,723	14,700				25-Mar	27-Mar	55
Longterm Avg	39,429	6,917	7,116	40,185	47,048	10.6			55.7
5-Year Avg	61,669	11,770	11,619	73,657	76,548	10.9	24-Mar	25-Mar	56.4

concern with herring in this area at recent biomass levels and that closing Federal public waters to non-Federally qualified users may not be effective in benefiting subsistence users (FSB 2007b).

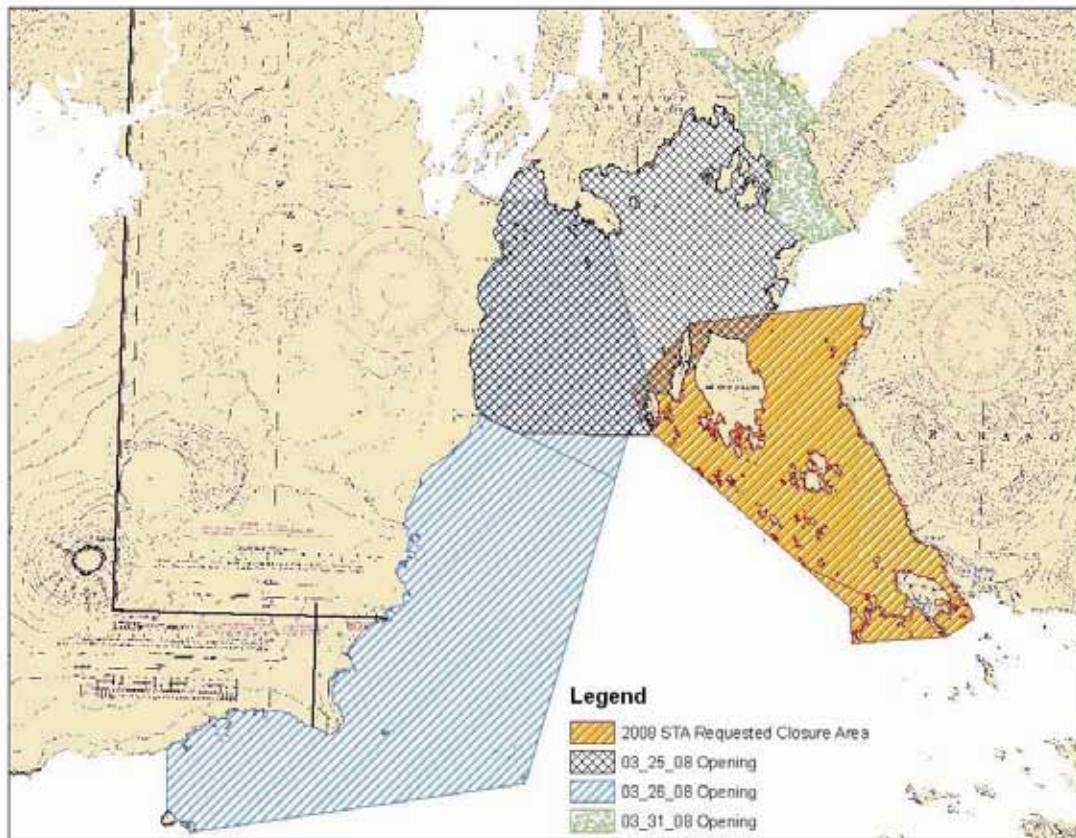
The biomass of herring returning to spawn in Sitka Sound has been trending higher for the last 30 years of commercial fishing (Figure 1). The 2008 pre-season estimate of herring biomass in the Sitka Area was the highest recorded at 87,715 tons. The estimated return will be available in the fall of 2008.

Subsistence users are allowed to harvest herring and herring eggs anywhere in and around Sitka Sound. The location and intensity of herring spawn in Sitka Sound varies from year to year. From 1978 to 2007, the amount of spawn deposition has varied from 13 to 104 nautical miles of beach per year and has not occurred in the same areas every year. Spawn deposition is more consistent in some areas, but spawning is not assured in any area every year. Spawn and subsistence harvest occurs in most years within Federal public waters. However, where people harvest herring eggs is ultimately determined by where the herring spawn. In 2008, the spawn in Federal public waters was very minimal.

The area where the commercial sac roe herring fishery occurs varies widely from year to year. From 1992 to 2008, the Federal public waters near Makhnati Island have made up part of the areas open to commercial sac roe herring fishing 6 out of 17 years (1993, 1999, 2001, 2003, 2005 and 2006). In 1993, the entire area was part of a larger commercial open area. In 1999, 2001 and 2005, only the Whiting



Harbor side (north side) was included and in 2003 and 2006, only the Nepovorotni side (south side) was included. Since the area of Federal public waters has been a part of larger areas open to commercial fishing, there is no way to apportion harvest from only Federal public waters. No commercial harvest occurred in Federal public waters in 2007 or 2008 and the vast majority of commercial harvest occurred well away from traditional subsistence harvest areas yet subsistence needs were not met (in 2007 and likely in 2008). For example, **Figure 2** displays the relationship of the 2008 commercial harvest compared to the area that STA requested that ADF&G avoid commercial harvest.



**Figure 2.** Relationship of the three commercial sac roe herring openings to the area requested by Sitka Tribe to be closed to commercial herring fishing.

Federal fisheries managers have been delegated the authority to close or re-open Federal public waters to non-subsistence fishing. This delegation may be exercised only when it is necessary to conserve fish stocks or to continue subsistence uses. In-season action would be nearly impossible to justify by a Federal manager in this case. Although the ADF&G forecasts the herring biomass before the season starts, the actual return and spawning success of herring is not known until after the commercial and subsistence fisheries are completed. Since the commercial fishery takes place well before the subsistence fishery, managers would not know that the subsistence fishery was poor until long after the commercial fishery ended.

In years when subsistence needs were not met, it is unlikely that a closure to other users in Federal public waters would have made a difference. For example, in the Federal public waters in 2008, no commercial harvest occurred and the spawn deposition was extremely minimal; therefore, a closure would not have been effective. Spawn location is a prime factor affecting harvesters' success. Additionally, inclement weather, spawn timing, loss of sets, and the amount of participation by high harvesters are other likely contributors to subsistence harvesters not meeting their needs. The size of the stock, the conservative commercial harvest levels, and the effective dispersion of the commercial fishery necessitates identifying other factors responsible for subsistence harvesters not meeting their needs. Closing Federal marine waters, as is being requested, provides no assurance that Federally qualified subsistence users will meet their herring needs.

The Alaska Board of Fisheries will meet in February 2009 to discuss Southeast fisheries issues and will be another forum to address herring issues in Sitka Sound.

Public testimonies during the Council meeting in September of 2008, and the Council recommendation, have been carefully considered, but the OSM conclusion remains unchanged.

## **OSM CONCLUSION**

**Oppose** Proposal FP09-05.

### **Justification**

This proposal is effectively the same as the proposal considered by the Board in December of 2007. At that time the Board determined there was no conservation concern in this area for herring at recent biomass levels and that closing Federal public waters to non-Federally qualified users may not be effective in benefiting subsistence users. The biomass in Sitka Sound has been trending higher since 1978 with the highest estimated pre-season biomass in 2008. There have been no restrictions on subsistence uses. No commercial harvest occurred in Federal public waters in 2007 or 2008 and the vast majority of commercial harvest was taken well away from Federal public waters and traditional subsistence harvest areas. In years when subsistence needs were not met it is unlikely that a closure to other users in Federal public waters would have made a difference. Adoption of this proposal would result in an unnecessary closure to non-Federally qualified users. The Alaska Board of Fisheries will meet in February 2009 to discuss Southeast fisheries issues and will be another forum to address Sitka Sound herring issues.

## **LITERATURE CITED**

ADF&G. 2000. ADF&G Wildlife Notebook Series: Pacific Herring. Internet: [www.state.ak/ADF&G/notebook/fish.htm](http://www.state.ak/ADF&G/notebook/fish.htm).

ADF&G. 2003. Community profile database. Microcomputer database, ADF&G Div. of Subsistence, updated 2003.

Bergman, W., W. Davidson, D. Gordon, K. Monagle And S. Walker. 2006. Southeast Alaska sac roe herring fishery, 2006. Regional Information Report No. 1J08-09, Anchorage, AK.

Davidson, W., W. Bergman, P. Doherty, K. Monagle and D. Gordon. 2006. Southeast Alaska sac roe herring fishery, 2006. ADF&G, Fishery Management Rep. No. 06-07, Anchorage, AK.

FSB. 2007a. Transcripts of the Federal Subsistence Board proceedings, January 10, 2007. Office of Subsistence Management, USFWS. Anchorage, AK.

- FSB. 2007b. Transcripts of the Federal Subsistence Board proceedings, December 12, 2007. Office of Subsistence Management, USFWS. Anchorage, AK.
- Funk, Fritz. 2000. ADF&G wildlife notebook series: pacific herring. Internet: [www.state.ak/ADF&G/notebook/fish.html](http://www.state.ak/ADF&G/notebook/fish.html). Last updated May 23, 2005. 1 page.
- Gordon, D. 2008. Sitka area management biologist. Pre-season Sac Roe Herring Fishery Meeting, March 24, 2008. ADF&G Div. of Comm. Fish. Sitka, AK.
- Schroeder, R. F., M. Kookesh. 1989. The subsistence harvest of herring eggs in Sitka Sound, Alaska. Tech. Paper No.173. ADF&G Div. of Subsistence. Juneau, AK.
- SESRAC. 2007. Transcripts of the Southeast Alaska Subsistence Regional Advisory Council proceedings, September 24–26, 2007 in Haines, Alaska. Office of Subsistence Management, USFWS. Anchorage, AK.
- STA. 2006. 2005 Post-season herring harvest report. Unpubl. Rep., Sitka Tribe of Alaska. Sitka, AK. 12 pages.
- Turek, M. F., 2003. Sitka Sound herring roe fishery 2003. Unpubl. Rep., ADF&G Div. of Subsistence. Douglas, AK.
- Turek, M. F., 2008. ADF&G Div. of Subsistence. Personal communication. Douglas, AK.
- Turek, M. F., 2006. Subsistence herring roe harvests near Sitka, Alaska. Report to the Alaska Board of Fisheries January 2006 for Proposal 81. Unpubl. Rep., ADF&G Div. of Subsistence. Douglas, AK.
- Woodby, D., D. Carlile, S. Siddeek, F. Funk, J. H. Clark, and L. Hubert. 2005. Commercial fisheries of Alaska. ADF&G. Special Pub. No. 05-09. Anchorage, AK.

## APPENDIX A

### Subsistence Harvest Methods

The following was excerpted from Schroeder and Kookesh (1989):

#### Timing of Harvest

Seal, sea lion, and sea gull feeding activity are indicators for the subsistence harvester that the herring have arrived to Sitka Sound. Regular monitoring of the traditional herring spawn areas is necessary to anticipate when the herring will spawn. Active harvesters drive out on Halibut Point Road to check for spawn daily or use skiffs to cruise the islands in Sitka Sound looking for schooled herring close to the beach. In recent years, ADF&G has monitored the herring roe percent as part of its management of the commercial herring roe fishery in Sitka Sound. Subsistence users follow ADF&G herring roe percent estimates. When the roe count reaches about 10 percent, the herring are ready to spawn. In most years, Sitka herring spawn in April. In the current year, however, first herring spawn appeared on March 26.

#### Selection and Placement of Hemlock Branches and Trees

Sitka's most active harvesters, those who supply many people with herring eggs, set 60-80 small hemlock trees about 15 to 20 feet long in sets of 2 to 10 trees. In contrast, less-active harvesters may set a small number of hemlock branches in one or two sets. Branches are much easier to handle. Egg laden trees can be so heavy that harvest from a small skiff is difficult. The most active harvesters prepare well in advance so they are able to have their sets in place at the optimal time and place.

Young hemlock trees are selected for use as herring egg strata. Elder informants told us there are two types of young hemlock. The first type has small ridges running parallel to the tree. The second and preferred tree is smooth round. This was confirmed by active harvesters who told us they do not harvest the trees with the ridges because they have moss growing in the ridges. The harvesters do not like moss peeling off on the eggs when they are cooked; therefore, round hemlocks are the preferred tree. Trees with full branches are preferred because they provide more area for egg deposition. Informants told us they used to be able to cut trees right at the spawning beaches, but they currently have to go further afield to find good trees. Trees are cut along the Sitka road system and transported by skiff to harvest sites. They are also cut from areas closer to the shoreline and spawning sites, particularly by the most active harvesters. Some harvesters go to more isolated areas in Sitka Sound for good trees. Trees are cut and trimmed with chainsaws, handsaws, and axes.

High harvesters told us they were putting out more sets in recent years and modified the way they make their sets. They have come to anticipate some of their sets will be stolen and put in enough sets to cover this expected loss. As much as possible, subsistence harvesters hide their set locations so they will not be found by others. Harvesters stopped using buoys to mark their sets and stopped using heavy rope to tie their trees or branches together. When they use heavy rope, seine boats are able to use their blocks and winches to hoist whole sets on deck. Tying off sets to the beach was also discontinued because t



shoreline would also be covered with spawn and show as a thick white line running to the beach from the set. Harvesters are able to find their hidden sets by remembering shore features.

Hemlock trees and branches are usually set such that they will just be submerged at low tide. Sets we observed were in water from about 10- to 30-feet deep. Rocks or construction bricks were tied to the butt end of trees and bunches of branches with pieces of web or seine twine. The trees or branches were set such that they would float perpendicular in the water. Trees in skates were tied together with heavy twine or pieces of round line and separated about 20 feet from one another. The most active harvesters try to get their sets in the water before spawning occurs and have found that good deposition of eggs will not occur if sets are made after the water is milky.

Subsistence harvesters think herring spawn best at mean low water; however, the spawn fluctuates with flood and ebb tides. One respondent said he has noticed that herring usually start spawning at small tides. Herring trees and branches are left to soak for 2-4 days after the spawn has begun depending on the amount of spawn in an area.

This year saw an early false spawn in some areas. A false spawn occurs where male herring are releasing sperm with very few females releasing eggs. When this happens, subsistence harvesters may pull their sets and move them to another area. Although, it is possible to wait for another herring spawn to set on top of the thin false spawn, the resulting subsistence product will not be high quality; the inner herring eggs from the false spawn will mature under the fresh new eggs. Matured herring eggs start turning brown, and small eyes become visible. When the color of eggs has changed from white to brown, the eggs are of lower quality for eating. When eyes have formed, they are no longer used. The preferred quality eggs are white deposited about an inch thick on the branches.

In addition to the setting methods described above, some branches are set directly from the beach at low tide. We also noted that about three branches were set from the float at Sandy Cove. We also heard reports that blueberry bushes, wire mesh screen, cheese cloth, and plastic tarp were occasionally used as deposition strata.

#### Harvesting Herring Eggs on Hemlock Branches

Small skiffs and runabouts are the most common vessels used by Sitka residents for harvesting herring eggs. We saw 14- to 18-foot aluminum skiffs with small outboards, open Boston Whalers of various sizes, and 23-foot cabin cruisers, and other similar small vessels being used for herring egg harvest.

Harvesters using sunken and unmarked sets get in the vicinity of their set by locating shore landmarks. They then drag a grappling hook through the water to snag either the egg-laden branches or the ground line connecting individual trees. The roe covered tree and branches that have been snagged are then pulled to the skiff. Although smaller branches may then be pulled directly into a skiff, branches and trees are more commonly cut into manageable pieces before they are loaded. Based on our observations, a fully laden tree can hold more than 1,000 lbs. of quality eggs. Much more than can be handled in a small skiff. Cut branches are placed in plastic totes, pails, and garbage cans or loaded directly into the harvesting skiff. Before the eggs are put in the boat, they are usually

dipped 2-3 times to rinse both the milt or sperm and to wash out any sand or foreign matter from the branches. Sand or other material lowers the quality of the herring eggs, and they stay fresh longer if milt is washed out.

If trees and branches are thickly covered with spawn, the harvesting vessel can be quickly filled to capacity. Eggs are brought home for processing and distribution. While harvesters of small amounts of eggs may carry them up from any docking location, high harvesters prefer docks with loading ramps that facilitate transfer of eggs to the bed of a pickup. One enterprising harvester loaded eggs directly from his 17-foot Boston Whaler to the lined bed of his pickup. A boatload of eggs, estimated at 1,000 to 1,500 lbs. could be quickly loaded this way.

In addition to having sets stolen or ruined by false spawn, sets may not be harvested for other reasons. Spawn might be too thin in a particular location resulting in a low quality subsistence product. Rough weather might wash sand and debris into the eggs. Because of weather or other reasons, the harvester may not be able to get back to his sets until eggs have developed. Trees and branches may also be left in the water because the harvester has fulfilled his or her subsistence needs. The eggs left in the water are thought to develop normally.

#### Harvesting Herring Eggs on Hair Seaweed

Harvestable hair seaweed grows just below lowest low water. A subsistence harvester wanting this product pays attention to where his seaweed grows and whether or not the area usually receives a good herring spawn. When minus tides coincide with good spawn deposition, as they did in 1989, ne (herring eggs on hair seaweed) can be harvested in quantity by hand by a person wearing waders or rubber boots. This variety of seaweed breaks off easily, especially then thickly covered with herring eggs. Ne can quickly be gathered by the armload. At higher tides, ne is gathered with rakes and grappling hooks. Ne beds can be extremely productive under good conditions. In 1989, we observed the harvest by hand of about 500 lbs. of ne by two people from a 10-foot-by-10-foot area in about 20 minutes at a minus tide. As with haaw, or herring eggs on branches, ne are taken home for processing.

#### Harvesting Herring Eggs on *Macrocystis* Kelp

Egg-covered fronds of *Macrocystis* kelp are selected by subsistence harvesters from kelp beds where herring have spawned. Fronds are pulled into the harvesting vessel by hand or with a rake or grapple and cut in containers for transport. Based on interview reports, 1989 was a poor year for harvest of herring eggs on *Macrocystis* kelp. A number of our informants stated they usually harvested on these strata, but did not find good spawn in their usual harvest locations. We were not able to observe this harvest.

In terms of overall harvest of herring eggs, eggs on *Macrocystis* kelp is harvested by fewer subsistence users and in much smaller quantity than ne and haaw.

Herring roe on *Macrocystis* was not frequently mentioned in our interviews with elders concerning early herring egg harvesting practices, and few informants referred to the Tlingit word daaw (*Macrocystis* kelp) as an important herring egg stratum. This indicated

that harvest on daaw has been of less importance in Sitka Sound than harvest on the other two strata for some time.

#### Preparing, Preserving, and Packing Herring Eggs

Food preparation follows the traditional cooking methods. Herring roe, both ne and haaw, is dipped in boiling water once or twice. Eggs become unpalatable if they are cooked too long. Overcooked eggs turn dull white, and they become quite rubbery in texture and lose their flavor. Properly cooked bunches of eggs are barely warmed and retain some translucence. Cooked roe is eaten with seal oil or hooligan oil. Soy sauce, butter, mayonnaise, honey, vinegar, salt, and pepper are also used. Herring roe may also be eaten fresh or uncooked.

Preservation starts as soon as possible after harvest. Although some eggs are dried or salted, freezing is the most common method of home preservation. Haaw are cut into suitable pieces and placed in zip-lock bags for freezing. Ne is treated similarly. Some people are experimenting with vacuum packing as a new method for preservation. Frozen eggs can be used until the next year's harvest, although quality declines, as with other frozen products.

Eggs harvested for customary trade and barter are shipped out of town fresh with haaw predominating. Eggs are shipped out of town by Alaska Airlines, local air taxis, private boats and Alaska Marine Highway.

#### High Harvesters

Based on subsistence survey data for the 1987 harvest year, a relatively small number of households in Sitka account for a large portion of the total harvest of herring eggs taken for subsistence use. Field work in 1989 confirmed earlier survey results. Through interviews with ADF&G, staff and Sitka residents and examination of shipping records, we found that about 20 households fall into the high harvesting group. For our purposes a high harvester was a household that was known to supply many households with herring eggs. Although systematic measurement was not attempted in 1989, we estimate that households in this group harvested about 300 lbs. of eggs or more. We also found all of the identified high harvesters were Alaska Native residents of Sitka. While there is non-Native participation in this fishery, non-Natives are not known to harvest in quantity or to participate as major suppliers of herring eggs to non-harvesting households. . . .

#### Distribution and Exchange

A number of high harvesters assisted us by providing detailed description of their harvesting, trade, and barter of herring eggs during the 1989 season. Except among the closest of family members, fairly direct reciprocity is expected for the exchange of herring eggs. This often takes the form of barter where a different, similarly valued, subsistence food is returned for herring eggs received. When the receiver has nothing to offer in return for herring eggs, cash may be the medium of exchange with the receiver paying the giver some amount to cover the expenses and time involved in harvesting, packing and sending this highly prized food. . . .

## APPENDIX B

The following text is excerpted from the 2008 Southeast Alaska Sac Roe Herring Fishery Management Plan (Bergman et al 2008). The plan covers all commercial sac roe herring fisheries in Southeast Alaska, but has been edited to include only the Sitka Sound fishery.

The harvest strategy for Southeast Alaska herring sac roe fisheries is based on the availability and distribution of mature herring containing quality roe (at least 10% mature roe), mature spawning biomass estimates, population age structure, recruitment, size-at-age, and past spawning success.

Herring populations are assessed annually to determine whether individual spawning stocks are above threshold and to determine the appropriate harvest rate (see Sliding Scale Harvest Rate on next page). As specified in 5AAC 27.190 HERRING MANAGEMENT PLAN FOR SOUTHEASTERN ALASKA AREA, harvest of a particular spawning stock is not allowed unless an assessment of the abundance and general condition of that spawning stock has been conducted and the estimated biomass is above the minimum spawning biomass threshold level. The threshold level is the herring biomass needed to meet minimum spawning and/or allocation requirements. The established threshold levels for the herring sac roe fishing areas are: Sitka Sound 20,000 tons.

Varieties of methods have been used to assess the status of herring populations in Southeast Alaska. Before 1970, herring abundance was assessed through visual estimates made from vessels using depth sounders and sonar immediately prior to spawning or on wintering aggregations. In addition, miles of spawn were documented with aerial or skiff surveys. A computer-assisted hydro acoustic survey method was developed in the early 1970s and used extensively during the late 1970s to the mid-1980s. Spawn deposition surveys were first used in 1976 and continue to be a key component of current assessment methods. The spawn deposition method combines diver estimates of herring egg deposition on the spawning grounds along with estimates of total area receiving spawn, average fecundity, average weight at age, and age composition, to yield an estimate of spawning biomass. In past years, estimates of spawning biomass from one year were used as the forecast to set harvest quotas for individual spawning stocks for the following year.

Beginning in 1993, ADF&G began using age-structured analysis (ASA) to forecast abundance for selected spawning stocks with sufficient historic stock information. The ASA method relies on a time series of herring population assessment data (e.g., survey estimates of egg deposition (trillions of eggs), fecundity, age composition and weight-at-age from samples of spawning herring, catch age composition and weight-at-age, weight-at-age from winter test sampling, and estimates of harvest-related mortality) to forecast herring biomass for specific spawning stocks. This method applies estimates of recruitment, growth, maturation, and natural mortality to an estimate of spawning escapement from one year to forecast biomass for the next year. This is an important development because gains in herring biomass due to recruitment, growth, and maturity are often not equal to the loss of biomass due to natural mortality, as is assumed when using the spawn deposition method for forecasting abundance. The ASA method is currently used to forecast herring abundance for the Sitka, and Seymour Canal fisheries.



**SLIDING SCALE HARVEST RATE**

The allowable harvest is based on a graduated scale that allows for higher harvest rates as a herring population increases relative to the threshold level. This approach maintains annual harvest rates between 10% at and 20% of the forecast spawning stock if the forecasted biomass is greater than established threshold levels. When the spawning stock biomass is at the minimum threshold level, a 10% harvest is allowed. The harvest rate formula that now applies to the Sitka Sound sac roe herring fishery based on Board of Fisheries action taken at the 1997 meeting in Sitka. For the Sitka fishery, the new harvest rate is calculated as follows using a 20,000-ton threshold:

$$\text{Percent Harvest Rate} = 2 + 8 \left[ \frac{\text{Forecast Spawning Population Size}}{\text{Threshold Level}} \right]$$

The Sitka Sound sac roe fishing area encompasses the waters of Section 13-B north of the latitude of Aspid Cape and Salisbury Sound in Section 13-A. Though regulations defining the sac roe seine area do not include Section 13-A, the department has allowed commercial harvest in Salisbury Sound by emergency order in 1989, 1999, 2002, and 2006. The department considers herring that spawn in Salisbury Sound part of the Sitka Sound herring spawning stock and has included Salisbury Sound spawn in the stock assessment.

This fall the department ran several ASA model runs exploring various biological parameters affecting the Sitka Sound herring stock and other model parameters to improve the fit of the model to the observed data. The ASA model uses a long time series of abundance and age composition data from department surveys conducted during the spring fishery. The best fitting ASA model run included splitting the maturity schedule estimates for the periods 1978–2001 and 2002–2007. The maturity schedule is the estimation of what age the herring are reaching maturity and capable of spawning. The model is showing that during the period 2002–2007 a smaller portion of age-3 through age-7 herring are recruiting as mature herring to the spawning grounds and the fishery. Maturation of herring is a function of growth and in recent years younger herring have been growing at a slower rate. The preliminary 2008 forecast for the Sitka Sound herring spawning biomass is 78,446 tons. Based on this forecast and a 20% harvest rate the preliminary GHF would be 15,689 tons. However, the department has selected a more conservative GHF than that forecast using the ASA model because it is not fully understood how changes in the environment that are affecting herring growth, maturation and survival will affect the herring population in future years. The preliminary GHF announced December 4, 2007 was 13,796 tons and was based on averaging the 2007 forecast biomass with the 2008 forecast biomass and a 20% harvest rate. Based on size-at-age data from winter samples collected in Sitka Sound on February 6, 2008, the GHF for the 2008 sac roe herring fishery has been revised to a final GHF of 14,723 tons. The ASA model forecast indicates the 2008 spawning population will consist of 4% age-3, 6% age-4, 9% age-5, 13% age-6, 12% age-7, and 57% age-8+ herring.

Herring distribution and roe quality will be monitored prior to and during the fishing period. Monitoring methods for 2008 will include aerial surveys, hydroacoustic surveys, and test fishing.

In 2008, ADF&G will continue to coordinate the test boat program through a fisherman coordinator who will assign daily test fishing boats requested by ADF&G. Prior to making test sets, the identified test boats will contact ADF&G biologists on the grounds

to monitor set locations and to plan for transport of herring samples to a central location for analysis by industry technicians. The areas open to fishing will depend on the distribution of herring, the need to provide for a fishery that will harvest good quality herring, and the need to provide a reasonable opportunity for subsistence.

In order to help ADF&G to ensure that a reasonable opportunity is provided for subsistence, a Memorandum of Agreement (MOA) was signed by ADF&G and the Sitka Tribe of Alaska (STA) on November 4, 2002, and finalized by the Alaska Board of Fisheries on December 17, 2002. This agreement brings consideration of potential impacts of the commercial sac roe herring fishery on the subsistence herring fishery in Sitka Sound to the ADF&G fishery manager through an in-season consultation process. An in-season Tribal Liaison will be consulted prior to each commercial opening. If the Tribe concludes that there is a potential for subsistence harvesters to be negatively impacted by the proposed opening, the Tribal Liaison will provide this conclusion and reasoning to the department verbally and in writing. An in-season task force consisting of the Tribal, industry and ADF&G representatives will meet immediately after receiving notification of an objection to a commercial opening. It will be necessary to specifically identify the composition of representatives and the individuals on the task force prior to the fishery being placed on 2-hour notice. In the event of dissenting recommendations from task force members, the ADF&G manager would be the final arbiter after having considered all input from the task force.

Beginning with the 2002 season STA, working in collaboration with ADF&G Subsistence Division, has developed a methodology using a household survey, in lieu of using a permit system, to estimate the subsistence herring roe harvest. Following each season, the Sitka Tribe of Alaska conducts a “census” type survey whereby all known participants in the subsistence fishery are contacted to determine the results of the subsistence harvest. The list of participants is changed each season to reflect newly identified participants and to remove past participants who have either moved or passed away. The survey information is used to determine the amount and quality of the subsistence harvest, and would indicate whether the amount reasonably necessary for subsistence (105,000–158,000 pounds) had been successfully harvested. In 2004 and 2005 ADF&G Subsistence Division was not able to collaborate due to budget constraints. The results of the 2007 harvest survey are not yet completed. Previous season’s harvest were 219,356 pounds in 2006, 75,572 pounds in 2005, 294,000 in 2004, 210,000 in 2003 and 112,000 in 2002.

To the extent that the commercial harvest can affect subsistence opportunities the department is determined to act on opportunities for openings outside of the high use subsistence areas as they arise. The department recognizes that fishing within the high use subsistence area may be necessary in order to provide an opportunity for the commercial fishery to harvest and to reach the season’s GHL. ADF&G, STA and industry will continue to work collaboratively in identifying sac roe harvest opportunities in the greater Sitka Sound area and whether it is necessary to distribute the harvest time and area in the commercial fishery in order to provide a reasonable opportunity for subsistence. Mechanisms of consideration for distribution of commercial harvest may include the following:

1. Limiting harvest in the highest frequency spawning area along the Halibut Point Road shoreline in proportion to historical use patterns established by past commercial competitive fisheries (50–55% of the GHL).
2. Choosing dispersal of time and area by selecting appropriate in-season options.

3. Considering recommendations from in-season task force members.

ADF&G held a Southeast Alaska sac roe fisheries pre-season planning meeting in Sitka on January 31, 2008. There was general agreement that the harvest strategy would be to harvest this season's GHL in four openings with at least one day between openings. This is consistent with previous season's harvesting rates assuming similar tendering and processing capacities. This will serve as a general plan of approach for the 2008 fishery. It will be necessary to remain flexible and adapt specific opening target harvest levels in consideration of in-season assessment of herring distribution and quality, changes in available processing and tendering capacity, input from industry representatives, and dispersing the harvest by time and area away from traditional subsistence harvesting areas. A general pre-fishery meeting immediately prior to the fishery will be held in Sitka when the fishery is being placed on 2-hour notice.

## **INTERAGENCY STAFF COMMITTEE COMMENTS FP09-05**

The Interagency Staff Committee (ISC) found the staff analysis for Proposal FP09-05 to be a thorough and accurate evaluation of the proposal. However, consistent with the Southeast Alaska Subsistence Regional Advisory Council's (Council) recommendation, a minority of the ISC suggests that the Federal Subsistence Board consider new information presented at the Council's meeting and that this information could be used to draw a different conclusion than that reached by the OSM. The majority suggests that the "new" information presented to the Council is mostly not new, is preliminary in nature (mostly without peer review) and, even with the "new" information, the OSM conclusion remains relevant to the analysis and is still valid.

Two parts of ANILCA for the Board to consider are: 1) does the Board have rationale to choose to not follow the Council's recommendation (Section 805(c)), and 2) would the Board's closing of Makhnati Island be consistent with Section 815(3), as further refined through the Board's closure policy?

The majority, consistent with the OSM analysis and conclusion, suggest that closure of the Makhnati Island area to non-Federally qualified users is not needed for conservation of the herring stock or to continue subsistence uses, and is not supported by substantial evidence.

The minority suggest that a closure could be an effective action enabling rural residents to continue their subsistence uses of herring eggs, which is consistent with the Council's recommendation and Section 815(3). The Council's position is supported by newly-revised information on insufficient egg harvests in 2008 (a 2<sup>nd</sup> consecutive year), as well as long term data which document the frequent, consistent use of Makhnati Island waters for spawning by Sitka Sound herring. This particular locality has been especially valuable to subsistence users, as it is an important area for collecting highly-prized herring roe-on-kelp, has protected conditions for safe gathering, and was one of the few places where rural residents were able to obtain good quantities of herring eggs during some of the low harvest years. Commercial fishing closures to protect herring during their spawning activities have been employed by fisheries managers in Washington and British Columbia. While the Makhnati Island Federal waters are of limited extent, a closure could nevertheless increase the likelihood that herring are able to successfully spawn with reduced disruption, at a site documented to be important for both herring reproduction and subsistence harvests.



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**Alaska Department of Fish and Game**  
***Comments to the Federal Subsistence Board***

**FP09-05 MAKHNATI ISLAND AREA HERRING**

**Introduction:** Proposal FP09-05<sup>1</sup> requests closure of marine waters of Makhnati Island and Whiting Harbor, which are subject to federal claims of jurisdiction, to harvest of herring by non-federally qualified users. The closure would only allow subsistence herring fishing by federally-qualified users and would bar state subsistence, sport, and commercial fisheries for herring or herring spawn in the area. The proposed closure area is not where the primary subsistence herring fishing has occurred, and commercial harvest rarely occurs in the area. In addition, no new information has been provided that would support the proposed closure.<sup>2</sup>

**Impact on Subsistence Users:** Adoption of this proposal would be potentially detrimental to subsistence fisheries, depending upon where and when herring spawn each year. The commercial fishery is managed to minimize harvests near heavily used subsistence areas. Actions by the Alaska Department of Fish and Game (Department) commercial fishery managers must be taken in a timely manner to be effective. The proposed closure would limit options for where a commercial fishery could occur, potentially resulting in adding a commercial fishery in other areas important to subsistence users. The proposed closure would also prohibit subsistence and sport harvest in this area by non-federally qualified individuals. A closure in this small area (560 acres) would have little or no impact on the total subsistence, sport, or commercial harvests.

**Opportunity Provided by State:** For the majority of subsistence herring egg harvest, the Department does not restrict fishing periods, seasons, or amounts of herring harvested for subsistence purposes in this area. Harvest of spawn on hemlock boughs or spawn on hair kelp is unrestricted, and no State permit is required. Post-season evaluation of subsistence harvest is accomplished by a harvest monitoring program conducted by Sitka Tribe of Alaska in cooperation with the Department's Division of Subsistence. The Alaska Board of Fisheries found that 105,000 to 158,000 pounds of herring spawn is the amount reasonably necessary for subsistence uses in Section 13-A and Section 13-B north of Aspid Cape. The Department requires a permit that may limit harvest of spawn on Macrocystis kelp and requires harvest reporting following the season. (See 5 AAC 01.730(g)) Harvest of spawn on Macrocystis kelp accounts for an average of only two percent of the subsistence harvest on all substrate types, so State requirements for spawn on kelp harvest is not a significant limitation.

The limited non-commercial exchange for cash of subsistence-harvested herring roe on kelp, harvested in Districts 1-16 under terms of a permit, is allowed as customary trade. The annual possession limit for spawn-on-kelp is 32 pounds for an individual and 158 pounds for a household of two or more people. The Department has authority to issue additional permits for herring spawn-on-kelp above the annual possession limit if harvestable surpluses are available. Commercial

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<sup>1</sup> Proposal FP09-05 repeats previous Proposal FP07-18, which was deferred by the Federal Subsistence Board (Federal Board) at its January 2007 meeting, renumbered and resubmitted for consideration at the Federal Board's December 2007 meeting, where it was rejected, 1-5, by the Federal Board.

<sup>2</sup> Information presented during public testimony to the Southeast Regional Advisory Council meeting on September 24, 2008, did not provide evidence that closing Makhnati Island area to non-federally qualified users would meet the requirements of the Federal Subsistence Board's closure policy or benefit subsistence users.

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herring vessels, permit holders, and crew members may not take or possess herring 72 hours prior to or following a commercial herring fishing period.

**Conservation Issues:** Currently, there are no conservation or management concerns for the Sitka Sound herring stock that potentially spawn in waters of the Makhnati area. From 1979 through present, the Sitka Sound herring resource has been above the current 20,000 ton threshold every year, with only one exception, and the run has averaged 75,342 tons per season in the recent five-year period (2003–2007). Herring are managed under a conservative management strategy that sets threshold biomass levels below which commercial harvest is not allowed and limits harvest rates to 10-20 percent of total mature spawning biomass. This is a time-proven strategy that provides for conservation of the resource. The area proposed for closure is so small that it is unlikely to provide conservation benefits above the threshold level and harvest rate, especially given the highly variable nature of herring spawning behavior.

**Jurisdiction Issues:** The Federal Board does not have authority to close this area solely to commercial herring fishing as suggested by some closure proponents. Instead, the Federal Board would have to close the area to herring harvest by all non-federally qualified users, which would include all subsistence, personal use, sport, commercial, or other harvests occurring under State regulations. Such a closure is not necessary to provide for continued federal subsistence and would violate section 815 of ANILCA. Such a closure may also be detrimental to subsistence uses by unnecessarily limiting options for management of commercial fisheries and, thereby, potentially increasing impacts to areas that are more important as subsistence use areas.

**Other Issues:** Herring biomass in Sitka Sound has shown a long-term increase and is considered healthy. The 55.3 total nautical miles of spawn in Sitka Sound in 2008 was consistent with the recent five-year average of 54.8 nautical miles and above the long-term (1964-2007) average of 42.4 nautical miles. The spawning biomass after the 2008 fishery, as estimated by spawn deposition surveys, is not available at this time, although preliminary assessment of spawn deposition indicates a record high level. The estimated average spawning biomass from 1964-2007 is estimated at 30,617 tons, and the recent five-year average spawning biomass (2003–2007) is estimated at 75,342 tons. The 2008 season forecast biomass of 87,715 tons was the highest on record. In contrast to the 2007 spawning event, in 2008 a significant portion of the biomass spawned on Kruzof Island shoreline on the west side of Sitka Sound. The Kruzof Island shoreline is not considered a viable opportunity for setting subsistence branches due to the distance from town, exposure to ocean surge, and generally unfavorable shoreline structure for setting branches. Significant spawning also occurred along islands near the road system, including heavily used subsistence areas of Kasiana and Middle Islands. Unlike the 2007 season, very limited spawning occurred within the federally claimed waters of Makhnati Island in 2008. During the 2008 season, bad weather generally did not impact subsistence users from accessing fishing sites, and commercial harvests during the 2008 season occurred well away from the Makhnati area. The 2008 commercial sac roe GHL of 14,723 tons was harvested on three separate days. Two openings occurred March 25, harvesting 1,147 tons in an area over 4 nautical miles distant from the Makhnati area. On March 26, two one-half hour openings occurred harvesting 9,380 tons. The fishery boundaries for the March 26, 2008, openings were just over 3 nautical miles from the Makhnati area, though the actual harvesting occurred over 7 nautical miles west on Kruzof Island shoreline.

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The third opening occurred March 31 harvesting 3,973 tons with the nearest open waters being 5.5 miles distance from the Makhnati area.<sup>3</sup>

**Recommendation:** Oppose.

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<sup>3</sup> For further information about recent commercial fisheries management of Sitka Sound herring stocks, please refer to the Department comments for Proposal FP08-18, at pages 272-274 of the December 12, 2007, Federal Board meeting materials, and the Federal Board December 12, 2007, meeting transcripts (pages 92-200).

## WRITTEN PUBLIC COMMENTS

**Oppose.** Sitka Herring Association represents the interests of commercial herring sac roe fishery permit holders and opposes the seemingly endless efforts by the Sitka Tribe of Alaska to eliminate the State managed commercial fishery for herring in Federally owned waters surrounding Makhnati Island. Since no new information has been presented by the Sitka Tribe of Alaska in proposal FP09-05 and that it is effectively the same as previous proposals FP07-18 and FP08-18, review of this proposal for the third consecutive year is unnecessary and overly burdensome to the affected parties. Consequently, Sitka Herring Association requests that the Federal Subsistence Board to deny further hearings on this subject.

This spring, Sitka Herring Association and a number of processing companies joined together to provide and pay for a transport vessel which was used to support subsistence efforts. In addition, one local processor independently provided a vessel and support for subsistence gatherers to harvest herring eggs on branches in excess of their own needs for those interested in obtaining the product. Both projects were designed to provide subsistence foods to those who—for one reason or another—were unable to obtain their own.

In spite of over 50 linear miles of herring spawn throughout Sitka Sound this season (2008), there have been reports of inadequate harvest for subsistence gatherers. Much of the spawn deposition appeared to occur outside of easily accessible areas with very little around Makhnati Island. While the utility of the Makhnati Island area for subsistence use is questionable under the best of circumstances, given this year's spawn distribution, withdrawal and closure of the Makhnati Island group would have had no affect on the outcome of subsistence gathering efforts.

Together, permit holders and processors are working to resolve legitimate issues as they arise with subsistence users. With Sitka Sound herring roe issues on the Alaska Board of Fisheries' agenda in January 2009, it would be helpful for the Federal Subsistence Board to refuse consideration of FP09-05 so that more thorough airing of subsistence issues relating to the entirety of the Sitka Sound area can be dealt with through the State regulatory process.

*Submitted by Scott Mcallister, President, Sitka Herring Association*

**Oppose.** United Fishermen of Alaska (UFA), a trade association of 37 Alaska commercial fishing organizations as well as individual members representing commercial fishermen throughout the state and its offshore waters, has monitored actions taken by the Federal Subsistence Board since 1999 when Federal management of subsistence fisheries through ANILCA was effected. Commercial fishing is above all dependent on access to marine fishery resources, and UFA has a general obligation to address any Federal Subsistence Board action that can compromise that access. Although UFA is aware of ANILCA mandates that provide a priority for Federally qualified subsistence users, we are concerned that proposal FP09-05, which would close Federal waters near Makhnati Island in Sitka Sound to commercial herring fishing, does little or nothing for subsistence users while usurping State jurisdiction in the commercial fishery. The Alaska Board of Fisheries-approved management plan for the Sitka herring fishery has been designed with a herring biomass threshold that provides subsistence opportunities before any commercial fishery can take place, ensuring opportunity for subsistence harvest. We oppose proposal FP09-05 as an unnecessary intrusion into State fisheries management.

A similar measure was proposed in the 2007 cycle, deferred to 2008 and turned down by the Federal Subsistence Board. Commercial herring seiners, as indicated in testimony before the Board, provided transportation of subsistence users to and from Makhnati Island in the spirit of cooperation between commercial and subsistence fishing communities during the 2008 fishery.

UFA urges the Federal Subsistence Board to reject proposal FP09-05 or any related RAC variations that can compromise well-managed and sustainable commercial fisheries in waters that—except for an oversight in title transfer related to statehood—would clearly be State of Alaska territorial waters.

*Mark Vinsel, Executive Director, United Fishermen of Alaska*